



# INSULIN RESISTANCE

A condition where cells become less responsive to insulin, initially causing high insulin levels that lower blood sugar (hypoglycemia). Over time, insulin declines, leading to high blood sugar (hyperglycemia) and increased type 2 diabetes risk.



## Possible Contributing Factors

- Diet high in refined carbs, added sugars, processed foods and unhealthy fats
- Chronic stress (increased cortisol can elevate blood sugar and insulin)
- Sedentary lifestyle reduces insulin sensitivity
- Hormone imbalance: PCOS and thyroid dysfunction
- Dysbiosis/gut health issues contributes to inflammation
- Excess body fat, especially visceral fat releases inflammatory markers affecting insulin
- Sleep deprivation can disrupt hormone balance and glucose metabolism
- Age/muscle loss decreases insulin sensitivity
- Environmental toxins (endocrine disrupting chemicals can impair hormone regulation)

## Lifestyle & Dietary Recommendations

- Follow a whole foods VPF diet with quality proteins, vegetables, and healthy fats in 3 meals daily to stabilize blood sugar. Add cinnamon liberally over food or drink as a tea
- If snacks are needed, opt for protein and fats (e.g., turkey slices, beef jerky, nuts, seeds, protein powder)
- Limit starchy carbs to ½ cup cooked grains and 1 cup root vegetables daily, and 1-2 whole fruits per day
- Avoid sugar, sweetened beverages, processed and refined carbs/anything made from flour, and alcohol
- Avoid fried foods and inflammatory vegetable oils (i.e. canola, soy, corn, cottonseed, sunflower oil, etc)
- Regularly consume probiotic-rich foods like sauerkraut, kimchi, kefir to support gut microbiome health
- Build muscle with resistance training at least 3 x per week to boost insulin sensitivity and glucose uptake
- Reduce stress: grounding, deep breathing, more time in nature, gratitude journaling, meditation, delegating tasks, saying 'no' more often, find more joy, strengthen social connections, Epsom salt bath
- Prioritize sleep hygiene
- Spend time outside daily (vitamin D plays a role in insulin regulation). Walk daily to increase physical activity
- Opt for personal care products with low chemicals by choosing brands with a toxicity score of 2 or less on <https://www.ewg.org/skindeep/>

## Supplement Considerations

- Blood sugar support formula (i.e. biotin, chromium, berberine, alpha lipoic acid, cinnamon)
- Thyroid support formula (i.e. iodine, zinc, vitamin A, selenium, tyrosine) – if needed
- Magnesium
- Vitamin D (if needed)
- Omega-3 fatty acid
- Resveratrol